

Summary Information Page

i. **Funding Opportunity Number and Category**

- a. RFA Number: EPA-R5-GL2014-2
- b. Category: Watershed Management Implementation

ii. **Project Title:** Menomonee Riverbank Stabilization and Public Access Project

iii. **Applicant Information:**

Redevelopment Authority of the City of Milwaukee
809 North Broadway
Milwaukee, WI 53202

[REDACTED]

iv. **Type of Organization:** (a) Local Government

v. **Proposed Funding Request:** \$580,000

vi. **Project Duration:** March 1, 2015 – August 31, 2016

vii. **Brief Project Description:** This Project involves re-grading and stabilizing 900 linear feet of the Menomonee River bank with native plants and trees, excavating contaminants, and providing additional public access to the river. The Project will minimize the volume of water flowing directly to the river thereby limiting the residual contaminants being conveyed to the river. Along with the innovative stormwater park constructed in the adjacent business park, it is estimated that this riverbank stabilization work will remove approximately 18 tons or 85% of the suspended solids from the stormwater on an annual basis.

viii. **Project Location:** This project is located on the Lower Menomonee River in Milwaukee County in southeastern Wisconsin. It is in the Lake Michigan drainage basin, the Milwaukee River Estuary Area of Concern (AOC), and part of a WI Priority Watershed.

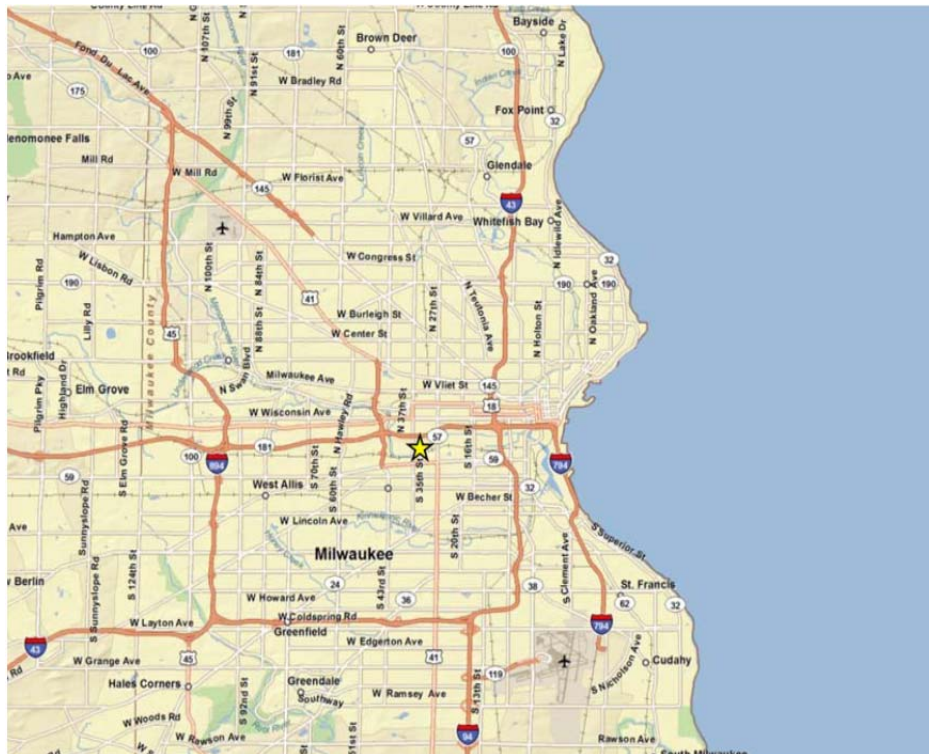
[REDACTED]

Work Plan

i. Project Summary and Approach

GLRI Relevance: The Menomonee River Valley is at the heart of the city of Milwaukee and represents one of the most ambitious river restoration and watershed improvement efforts in the region. The restoration and stabilization of the Menomonee River and its banks is in keeping with the needs and priorities of the U.S. Environmental Protection Agency (EPA) Great Lakes Restoration Initiative (GLRI) Action Plan, particularly the Nearshore Health and Nonpoint Source Pollution Focus Area as well as the Habitat and Wildlife Protection and Restoration Focus Area. The Menomonee River flows directly into Lake Michigan, so improvements to water quality will very directly impact the Great Lakes.

The Menomonee River watershed includes approximately 140 square miles, including portions of Milwaukee, Waukesha, Ozaukee, and Washington counties. Approximately 52% of the watershed is in urban/suburban land uses, with agriculture (22%), open space and surface water (14%), forests (7%), and wetlands (5%) areas as well (WDNR 2010 Water Quality Management Plan Update: The Menomonee River Watershed, http://dnr.wi.gov/water/basin/milw/wtplans/MI03/MI03_WTPLAN.PDF). The middle and especially the lower portions of the Menomonee River watershed are highly urbanized. The Menomonee River ultimately discharges to the Milwaukee Estuary Area of Concern (AOC) that includes the federal navigation channel in the Inner and Outer Milwaukee Harbor. The Menomonee is also a Priority Watershed under the Wisconsin Nonpoint Source Pollution Abatement Program.



Location of site in relation to Lake Michigan

Background: The Menomonee River Valley was once a vibrant wetland that provided a rich way of life for Native Americans, with its meandering river, lush tamarack swamp and wild rice marsh leading into the estuary of Lake Michigan. With the expansion of Milwaukee during the industrial revolution, the

Menomonee Valley's bluffs were cut and used as fill. The river was channelized—its banks armored and concretized in many places into the more defined edge condition seen today.

At the height of Milwaukee's Industrial rise, the west end of the valley became the nation's third largest railroad repair and maintenance shop (Chicago, St. Paul & Pacific Rail Road or Milwaukee Road). However, by the 1970s many of the previous Valley industrial firms abandoned their outmoded factories and polluted grounds and moved to newer, more efficient plants outside the city or went out of business entirely. Some of the contaminated properties have contributed to the significant degradation of area surface waters, habitat and fishery, leaving the Menomonee River Watershed one of the most heavily polluted watersheds in the State of Wisconsin.

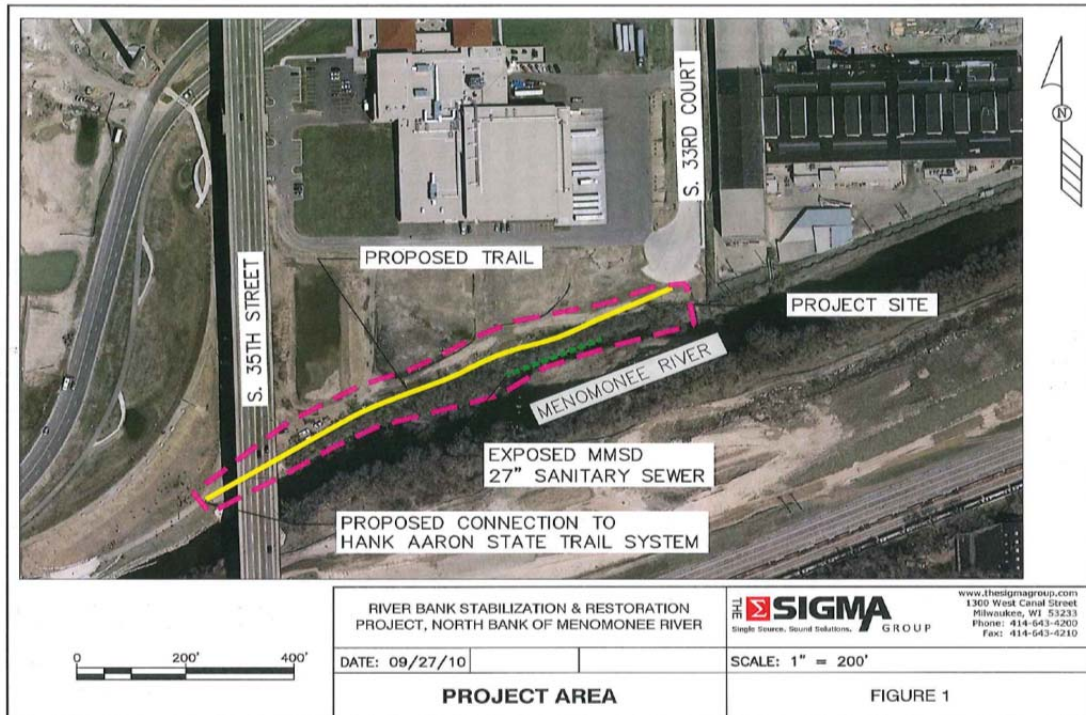
Based, in large part, on the Menomonee River Watershed Plan recommendations, efforts are underway to increase the extent of more naturally functioning floodplains features along the lower reaches of the watershed through the use of practices that are more technically and ecologically sound than historical flood control practices. These practices include but are not limited to the removal of concrete lined stream channel inverts, floodplain lowering, centralized storage, diversion, and purchase of open lands for infiltration and storage. Over \$195 million has been invested throughout the watershed by the Milwaukee Metropolitan Sewerage District (MMSD) and its partners to abate flooding using these practices.

The Redevelopment Authority of the City of Milwaukee ("Redevelopment Authority") began the revitalization of the Valley around 2000. Ironically, the current *industrial redevelopment* in Milwaukee's Menomonee River Valley is the catalyst for river revitalization and ecological improvements. On a blighted 133-acre central city site called "Wisconsin's most visible brownfield," contemporary redevelopment efforts have brought together an unprecedented number and variety of partners to implement a truly innovative restoration and redevelopment site plan. The award-winning brownfield redevelopment project offers integrated development practices whereby the City of Milwaukee and its partners has built 60-acre industrial park with essentially no storm sewers. Instead, stormwater and floodwater management has been achieved through a series of topographies and natural plantings (a stormwater park) and a re-graded and revitalized riverbank; practices that can be replicated throughout the coastal region. The project, called the Menomonee Valley Industrial Center and Community Park (MVIC), provides for 60 acres of job-rich redevelopment and 73 acres of ecological and river-edge revitalization.



Menomonee Valley Industrial Center and Community Park (MVIC) with identified riverbank – Google

The proposed Menomonee Valley Riverbank Stabilization and Public Access Project (“Project”) is part of this larger initiative by the Redevelopment Authority to redevelop the former rail yard into the MVIC. Currently, the business park portion of the MVIC includes 10 businesses and 1,300 jobs while the ecological revitalization includes a 24 acre park on the southern banks of the Menomonee River, called Three Bridges Park, and approximately 1,200 feet of riverbank restoration adjacent to the subject area. The previous riverbank restoration efforts used tools such as excavation, rip rap, erosion mats, and planting of trees. The work also involved the construction of a canoe launch for increased public access. Despite all of this, there is one remaining portion of riverbank – the “north bank” – not yet completed. This missing segment is the basis for this grant application.



Project site between S. 35th Street and S. 33rd Court

Project Summary: The current riverbank is continuing to undergo severe erosion, thereby contributing significant volumes of particulates including asbestos-containing material, as well as volatile organic compounds, lead, phosphorus, and nitrogen to the river. For example, subsurface investigations completed by the City of Milwaukee show that lead is present within an approximately 7,900 square foot area of the project site at concentrations greater than RCRA levels for characteristically hazardous material. This characteristically hazardous soil is present at depths from 2 to 4 feet below ground surface.

The proposed Project encompasses more than 900 feet of steep, unstable riverbank along the north bank of the lower Menomonee River between the S. 35th Street viaduct and S. 33rd Street Court. As with the rest of the Menomonee Valley, the project area was developed from the former meanders and wild rice marshes of the Menomonee River through substantial stream relocation, grading, and filling activities. A 2001 geomorphic assessment study performed for MMSD identified the study division represented in this site among the four most unstable (degraded) of the 21 total divisions of the lower Menomonee River. The area was an open air yard occupied by several rails upon which damaged cars were repaired. Subsurface investigations completed by the Redevelopment Authority during their acquisition of the

parcel showed that the fill used to claim the site from the marsh included a significant amount of foundry material (sand and slag) and concrete/brick debris containing variable concentrations of specific contaminants. Specifically within the project area select volatile organic compounds (VOCs) including benzene were detected at concentrations greater than ch. NR 720 generic residual contaminant levels (RCLs) within shallow soils. In addition, lead is present within an approximately 7,900 square foot area of the project site at concentrations greater than RCRA levels for characteristically hazardous material. This characteristically hazardous soil is present at depths from 2 to 4 feet below ground surface and requires further remedial action to meet Wisconsin Department of Natural Resources (WDNR) cleanup levels.

In addition to the VOC and lead impacts associated with historical operation and fill activities, rapid urban development of the overall watershed has negatively impacted the project area. As a result of rapid urban development and watershed-wide increases in impervious surfaces, non-point sources pollutant loadings have increased and the watershed's hydrology is flashier with higher peak velocities and shear forces. In response to these watershed-wide changes and other historical hydrologic modifications (i.e., channelization and floodplain fill), the environment along the river and corridor has become very degraded. Factors responsible for the degraded environment include: the erosion of contaminated stream banks; the lack of complex river channel morphology and monotonous habitat features; infestation of the corridor and stream banks by non-native plants, and low native plant diversity, density and relative abundance. Collectively, these factors contribute to poor instream and corridor habitat; low diversity and relative abundance of native flora and fauna populations, and dominance by species tolerant of poor habitat; degraded water quality; excessive sedimentation rates; poor aesthetic values, and limited opportunities for land and water-based recreational uses.



Photo taken of the riverbank looking west along the eroded riverbank – Photo courtesy of [REDACTED]



Photo taken along riverbank depicting current erosive slope - Photo Courtesy of [REDACTED]

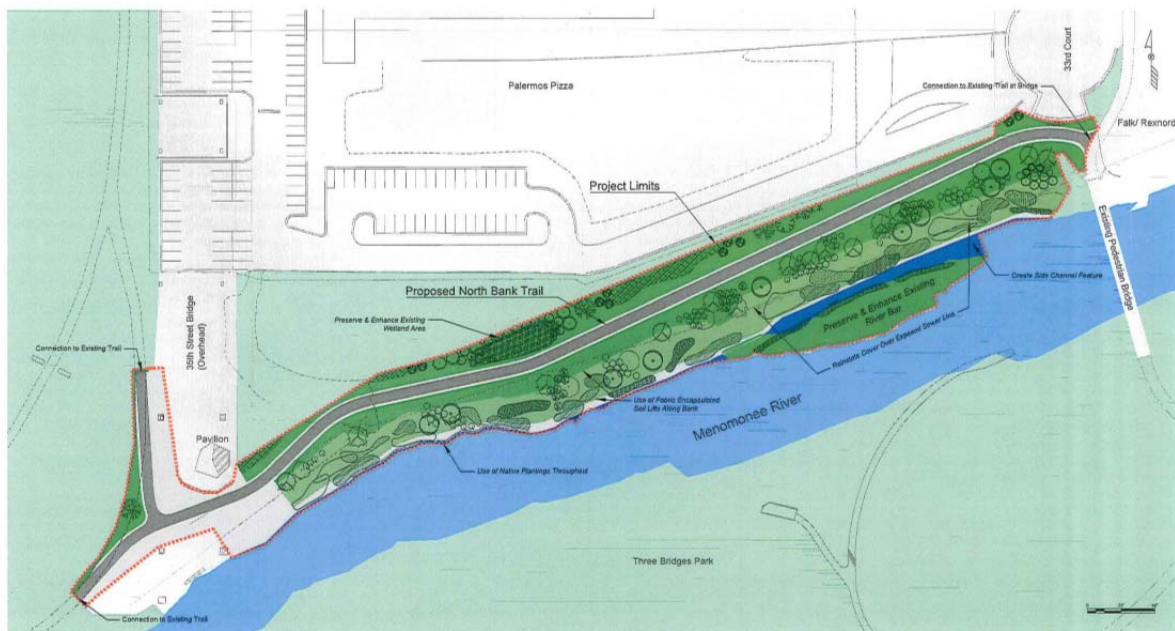
Besides the environmental contamination, rapid urban development, and lack of biodiversity, the reaches along the proposed Project have also been classified as some of the most severely-eroded stretches of the Menomonee River. The existing bank was simply constructed out of building debris. It is a mix of concrete and other waste materials that has re-vegetated with largely scrub trees over the past 30 years. Some parts of the bank are failing. The slopes range from 1:1 to 2:1 and thus are too steep to safely traverse. Due to severe erosion, there is also exposed rebar, sewerage pipes conveying wastewater, and other hazards. Since there is no stormwater control, stormwater runs from the site over the bank without treatment.

The re-grading and stabilization proposed here will not only greatly reduce the erosion of the bank itself and reduce pollutants that reach the river, but will also provide native vegetation that will serve as a final filtration barrier between sediment moving from the site to the Menomonee River itself.

In order to attain the above mentioned goals and restore the north bank of the Menomonee River from South 35th Street to South 33rd Court, the following activities will be undertaken with support from the requested grant funds:

- Excavating lead-impacted soil, asbestos-containing material, and other contaminants in the riverbank that will be managed and disposed of in accordance with the State of Wisconsin-approved Remedial Action Plan;

- Incorporating environmental remediation via a soil cap over existing VOC-impacted soil and lead impacted soil along the riverbank, in order to mitigate the potential for further release of these impacts into the Menomonee River;
- Excavating the building debris that comprises the current riverbank;
- Grading of steep/eroded areas for approximately 900 linear feet of riverbank, in order to establish riverbank slopes conducive to stabilization via native vegetation;
- Installing an erosion mat and establishing native vegetation along the riverbank to stabilize slopes and improve plant and animal diversity and habitat;
- Increasing the protection of a currently exposed 27-inch diameter MMSD sanitary sewer that runs along the water's edge. According to MMSD, the 27-inch diameter sanitary sewer line was at one time adequately buried beneath several feet of soil, but excessive erosion has exposed the line so that it no longer has enough adequate cover to ensure its long-term integrity;
- Toe-protecting the slopes through rip-rap, native vegetation plantings as well as fiber encapsulated soil at the Ordinary High Water Mark area to mitigate the potential for further undesirable erosion and allow the construction of concrete and stone paths for better public access; and
- Constructing connections to the Hank Aaron State Trail along the Menomonee River bank.



NORTH BANK TRAIL

The proposed Menomonee Valley Riverbank Stabilization and Public Access Project

Schedule and Milestones: This is a shovel-ready project. The bid specifications have already been prepared and will be let as soon as total project funding is secured. As described in the Budget Narrative, the Redevelopment Authority has already secured \$940,000 in funding from a combination of four other grants and is also committing a \$50,000 match of local funding. This GLRI grant award represents the final missing piece of grant funding to turn this project plan into reality. If awarded in early November, the Redevelopment Authority anticipates the following schedule and milestones:

- Grant Award Date March 1, 2015
- Develop Bid Schedule April 1, 2015
- Complete STEPL Doc. May 29, 2015
- Proceed Selected Contractor August 1, 2015
- Project Completed July 1, 2016
- Grant Closed Out August 31, 2016

Quality System Documentation: The Redevelopment Authority anticipates that we will need to develop a Quality Assurance Project Plan to ensure that any environmental sampling completed as part of the contaminated soil management will be completed in accordance with all require federal standards.

Experiential Learning: While the actual construction project will not directly involve children in grades six through twelve, this and all projects in the Menomonee Valley are highly visible to Milwaukee's citizens and visitors. Large numbers of visitors are visiting this high-profile MVIC redevelopment project. This is partly due to its location adjacent to a major-league baseball stadium and the Hank Aaron State Trail running immediately past the site, connecting the stadium to Lake Michigan, five miles east. If you include a casino and the Harley Davidson Museum, entertainment venues attract over 7 million visitors per year to the Menomonee River Valley. These three destinations, combined with the business and recreational destinations on the site itself give the project tremendous visibility and provide learning opportunities for all ages.

The site has obviously also attracted significant interest in the development community locally where the City of Milwaukee has partnered with non-profits such as the Menomonee Valley Partners, Inc. (MVP), the Sixteenth Street Community Health Center (SSCHC), and the Urban Ecology Center (UEC), and other governmental agencies such as the MMSD and the WDNR. The partnership with and presence of the Urban Ecology Center, in particular, will invite children to explore the Menomonee River Valley and provide experiential educational opportunities.

Nine Elements Guidance: The north bank stream restoration project meets the nine key elements as outlined by EPA to ensure that solutions address documented nonpoint source-related water quality problems an prevent future plans. The Menomonee Watershed Plan is available here: http://dnr.wi.gov/water/basin/milw/wtplans/MI03/MI03_WTPLAN.PDF and while it is not a state-approved Nine-Element Watershed Management Plan, it is a watershed management plan that is consistent with Section 2.6 of EPA's Handbook for Developing Watershed Plans to Restore and Protect Our Waters.

Permits and Approvals: Due to the type of work proposed in the plans and specifications, and the proximity to the Menomonee River, several permits are required. All required permits have already been issued by the State of Wisconsin including permits for Streambank Erosion, Wetland Fill, and Construction Site Storm Water Runoff. The permits are provided in Document 16B.

ii. Results – Outputs and Outcomes

The proposed Project involves excavating the contaminants, and re-grading and stabilizing the 900 linear feet of riverbank with native plants and trees. This work will minimize the volume of water flowing directly to the river thereby limiting the residual contaminants being conveyed by the river. Along with the innovative stormwater park constructed in the MVIC, it is estimated that this riverbank stabilization work will remove approximately 18 tons or 85% of the suspended solids (particulates, nitrogen, and phosphorus) from the stormwater on an annual basis. This estimated will be confirmed or revised as appropriate using a Spreadsheet Tool for Estimating Pollutant Load (STEPL).

While this project focuses on a very specific stretch of degraded riverbank and the technical requirements for its stabilization, one cannot separate this project from the larger context of the Menomonee Valley revitalization efforts. Because of the scope and complexity of this revitalization effort, there are numerous ways to benchmark and measure project successes. The MVIC redevelopment is a massive effort that brings to bear financial and technical resources from all levels of the public sector along with significant contributions from both the private and non-profit sectors. With the collective vision of sustainable development, these sectors have been working together for more than ten years with a goal of reinventing the Menomonee Valley as a working landscape that will cleanse pollutants and incorporate natural processes while providing living-wage jobs and opportunities for recreation.

In 2002, the sectors formed a ‘benchmarking initiative’ coalition to measure the ecological benefits of this overall project. It includes groups such as Menomonee Valley Partners (MVP), Sixteenth Street Community Health Center (SSCHC), the Wisconsin Department of Natural Resources (WDNR), and the Urban Ecology Center (UEC). The baseline was created in 2003 and will be revisited in the near future to measure the benefits of the redevelopment (including the health of the river). This comparison includes a comparison of human health indicators. Some human health indicators include access to open water and greenspace. Improved access to the Menomonee River should show an improvement for neighborhood residents and visitors to the area. This Project will improve local wildlife and river water quality while creating a more attractive site for business development and job creation.

Another tangible method for monitoring the progress of the Project is to first quantify the volume of contaminated material excavated from the riverbank including the asbestos-containing material and lead-impacted soil. This volume of material would be managed appropriately and would not continue to contaminate into the Menomonee River. A similar assessment could be done for the volume of soil that is stabilized and would not erode into the river. Re-grading the 900 feet of riverbank would protect a significant volume of soil from washing into the river. This volume could be measured once the design and construction are completed. The current estimated volume of erosion will be limited to 10% of the current amount with approximately 18 tons or 85% of the suspended solids removed from the runoff to the Menomonee River. More complete volumes could be measured once the design and construction are completed. A less quantitative method of measurements would be the aesthetic improvement that can be evaluated by the look and cohesiveness of the overall project.

Additionally, one can quantify the increased numbers of visitors to the riverbank once all of the restoration work is completed. Environmental revitalization and additional access to the Menomonee River will improve the quality of life for these visitors, the new employees of the MVIC, and neighboring residents. Furthermore, the UEC opened a branch in 2012 adjacent to the MVIC that brings an additional 30,000 students from area schools for an environmental education program on the Community Park and the Menomonee River.

In sum, the following monitoring and evaluation criteria will be used in order to determine the success of the overall Project:

- Environmental remediation: The Project will be considered a success when the VOC and lead impacted soils in the project area have been capped and the cap is not eroding (OUTPUT). This will be monitored through annual inspections of the soil cap to ensure no contact with the underlying impacted material.
- River bank erosion: The current erosion rate for the project area is 18 tons per year of soil eroding into the Menomonee River. The Project will be considered a success if the amount of soil erosion per year is less than the current number (OUTPUT).
- Cultural enhancement and improved access: This will be monitored by recording the number of users of the portion of the Hank Aaron Trail that is constructed in the project area. Success will be determined by whether or not the number of users increases from the current number (OUTPUT).
- Overall aesthetic improvement of the historically disturbed and filled area: This is subjective, but aesthetic improvement will be evaluated by the look and cohesiveness of the project area (OUTCOME).

Perhaps the most promising qualitative measure (OUTCOME) of the success of this project can be demonstrated by the success of a very similar project upstream. In 2007 and 2008, the Menomonee River had undergone significant flooding due to severe rain storms. The stabilized portion of the riverbank in the MVIC has performed exceptionally well while the remaining 900-feet of riverbank not stabilized on the northern side of the river have contributed large volumes of eroded soil to the water column during each of the storms. This is causing even greater concern for future rain storms and flooding but stabilization of the riverbank will limit the volume of erosion.



Flood event in 2007 showing riverbank restoration west of S. 35th Street – Photo courtesy of [REDACTED]


Schedule and Milestones: This is a shovel-ready project. The bid specifications have already been prepared and will be let as soon as total project funding is secured. As described in the Budget Narrative, the Redevelopment Authority has already secured \$940,000 in funding from a combination of four other grants and is also committing a \$50,000 match of local funding. This GLRI grant award represents the final missing piece of grant funding to turn this project plan into reality. If awarded in early November, the Redevelopment Authority anticipates the following schedule and milestones:

- Grant Award Date November 1, 2014
- Develop Bid Schedule December 1, 2014
- Proceed Selected Contractor April 1, 2015
- Project Completed September 1, 2015
- Grant Closed Out October 31, 2015

iii. Collaboration and Plans

Collaboration: The Menomonee Valley Riverbank Stabilization and Public Access Project is a part of a larger project to redevelop the most visible brownfield in the State of Wisconsin, a 133-acre former rail yard, into a sustainable business and community park called the Menomonee Valley Industrial Center and Community Park (MVIC). A plan was envisioned in 2001 by Wenk & Associates to redevelop the former rail yard that included reclaiming 60 acres for business development and creating 73 acres for community space/greenspace with a significant amount of that being riverbank restoration. The 60 acre industrial park is nearly filled with 10 manufacturing businesses and only 4 acres remain. The majority of the community park/greenspace area is complete with the exception of the Project. The most recent success of the community space/greenspace area is the opening of Three Bridges Park on July 19, 2013 which is summarized in a JSOnline article included in Document 15 or at the following link: <http://www.jsonline.com/news/milwaukee/a-grand-urban-opening-for-milwaukees-new-three-bridges-park-b9958484z1-216300391.html>.



Three Bridges Park opening (July 19, 2013) with view of Project on left - Photo Courtesy of 

At 24 acres, Three Bridges Park is the largest city-owned park and the largest public park to open within the city in several decades. The park stretches along the south bank of the river, from S. 35th Street to a few blocks east of S. 27th Street and is directly across from the Project. Soil mounded atop the former rail yards offers views of the downtown skyline and valley businesses. The park includes three bike and pedestrian bridges that link the Menomonee Valley, Mitchell Park, and southside neighborhoods and offers two miles of paved trails, access to the river for fishing or canoeing/kayaking, and benches for rest. In addition, Three Bridges Park will be used as an outdoor classroom for the Menomonee Valley branch of the Urban Ecology Center.

To depict the collaboration on this work, the land beneath Three Bridges Park is owned by the Redevelopment Authority. The WDNR manages the Hank Aaron State Trail, which runs through the park. The City of Milwaukee owns and maintains the three bridges. The park, trails, and bridges were constructed by the Department of Transportation. MVP and UEC, which have raised private sector funding to complete the vision, play roles in long-term park maintenance, programming of the space, and installation of art and amenities. Together, these groups, along with other community-based organizations and countless individuals partnered to create a park that truly connects the community with improved access to jobs, outdoor education programs, and recreational activities. The project involved the public from the early stages of design conception all the way through to construction and beyond. The Valley has a rich narrative of bridging the past to the future and north to south. Three Bridges Park itself bridges nature and the city, allowing us to cross over the industrial corridor and access a place of respite in the heart of the city. The park's programming also bridges the past and the future, educating about the land's rich history and connecting people through ongoing volunteer activities. The name captures the spirit of transforming the Valley into a place that connects people to jobs, nature, and each other.

Just as the three bridges of the park connect the community to the Valley, this Project will provide further connection between Three Bridges Park, the MVIC, and beyond with the bicycle trail. In addition to the partners listed above who made Three Bridges Park a reality, there have been other collaborative efforts in the Valley, including this Project, that have had an extensive network of regional partners including:

- Over 500 citizens providing input on site design including real estate developers, bicyclists, birdwatchers, neighbors, business owners, engineers, and environmental scientists.
- The Milwaukee Metropolitan Sewerage District and Wisconsin Coastal Management Program have funded planning and design of proposed elements along the Menomonee River.
- The Redevelopment Authority has partnered with groups like the Metro Milwaukee Association of Commerce and Commercial Association of Realtors to show that erosion control and stormwater treatment can exceed regulation and provide a business and community amenity. In fact, former EPA Administrator Lisa Jackson has toured the stormwater park and referenced the park on several occasions to highlight how developments can incorporate stormwater management in an urban setting rather than convey water to the sewerage treatment center.
- The WDNR has met with stakeholders regarding the fisheries along this stretch of the river. The habitat of the fisheries has improved significantly but the State still has some concern over this stretch of riverbank where erosion occurs in the business park.
- The WDNR is also the lead agency in designing and constructing the bike trail linkages to the Hank Aaron State Trail. The project area is instrumental in making this connection for the north side of the riverbank.

Including the Menomonee Valley Partners and the Urban Ecology Center, there have been numerous organizations that have and will continue to provide information to their members that encourage feedback on the Project:

- Menomonee Valley Partners
- Urban Ecology Center
- Friends of Hank Aaron State Trail
- Sixteenth Street Community Health Center
- Friends of Milwaukee's Rivers
- Menomonee Valley Business Association
- Milwaukee Metropolitan Sewerage District
- Business Improvement District #26
- Wisconsin Bicycle Federation
- Urban Open Spaces Foundation
- Merrill Park Neighborhood Association
- Keep Greater Milwaukee Beautiful
- Notre Dame Middle School
- Milwaukee County Parks Department
- Wisconsin Department of Natural Resources
- University of Wisconsin-Milwaukee
- Wisconsin Department of Transportation
- Marquette University
- Layton Boulevard West Neighbors

Plans: Many of these organizations have provided input on the design and specifications of the Menomonee Valley Riverbank Stabilization and Public Access Project. This project is an outgrowth of recommendations made in the Menomonee River Watershed Plan. The constituency groups have provided input on native plant restoration, environmental remediation, public access, bicycle connections, public health, fisheries, and many other areas of interest. The design team, including the Redevelopment Authority as the owner, incorporated many of the recommendations. The resulting specifications were drafted and provided to the regulatory agencies including the WDNR, as required for permit approval, and the Wisconsin Department of Transportation, as required per the grant agreement. The specifications, which are included in Document 16B, include:

- Excavating contaminated soils in the riverbank that will be managed and disposed of in accordance with the State of Wisconsin-approved Remedial Action Plan;
- Incorporating environmental remediation via a soil cap to mitigate the potential for further release of these impacts into the Menomonee River;
- Excavating the building debris that comprises the current riverbank;
- Grading of steep/eroded areas for approximately 900 linear feet of riverbank, in order to establish riverbank slopes conducive to stabilization via native vegetation;
- Installing an erosion mat and establishing native vegetation along the riverbank to stabilize slopes and improve plant and animal diversity and habitat;
- Increasing the protection of an exposed 27-inch diameter MMSD sanitary sewer that runs along the water's edge;
- Toe-protecting the slopes through rip-rap, native vegetation plantings as well as fiber encapsulated soil at the Ordinary High Water Mark area to mitigate the potential for further undesirable erosion and allow the construction of concrete and stone paths for better public access; and
- Constructing connections to the Hank Aaron State Trail along the Menomonee River bank.

Voluntary Cost-Share: The Redevelopment Authority is committing \$50,000 in local funds that will likely come from a combination of Redevelopment Authority General Funds, Common Council Approved “Development Funds” and tax-increment district financing. A summary of additional leveraged funds is included in the Budget Narrative.

iv. Community-Based Focus and Environmental Justice Impacts

The Redevelopment Authority has a history of being aware and proactive to address environmental justice impacts within the community. In 2009, the Redevelopment Authority began working with EPA Region 5 as an Environmental Justice (EJ) Showcase Community. This collaboration was a multi-media, cross-program approach to engaging multiple stakeholders in coordinated action, in order to address EJ concerns in high-priority areas within each of the EPA regions. This new partnership opportunity allowed the Redevelopment Authority to find technical support at the EPA or one of the other federal partnering agencies (USDA, FDA, HHS, etc.) that may not have been available at the state level.

One of the primary EJ concerns in Milwaukee is a disproportionate proximity to contaminated properties, and the negative socio-economic and health impacts that brings to some of Milwaukee’s minority communities. Built on a foundation of robust industrial activity, Milwaukee has historically been dominated by rail yards, die cast companies, machine tool manufacturers, tanneries, foundries, and printers. Over the past three decades, Milwaukee has seen a decline in its traditional manufacturing base as companies have outsourced internationally or moved to suburban industrial parks. Unfortunately, this has left a legacy of vacant and underutilized formerly industrial properties adding to the adverse economic effects created by smaller neighborhood brownfield properties such as gas stations and dry cleaners.

A significant number of Milwaukee’s brownfield sites are located in the Menomonee River Valley, a five mile stretch that was once a major manufacturing center centered on a rail line, employing thousands of area residents. As can be seen from the demographic table below, the target community, which is made up of census tract 1868 (the census tract that includes the restoration project) and all census tracts directly adjacent to census tract 1868, is fairly similar to the average Milwaukee demographic, albeit with a slightly greater percentage of minorities and a substantially smaller percentage of owner-occupied housing. In contrast to State and National averages, Milwaukee and the target community have a higher percentage of minorities, a greater unemployment rate, a smaller median income and a greater percentage of rental properties.

Demographic Information:

Table 1 – Demographics Table	Target Community (Census Tract 186800 and all directly adjacent Census Tracts)	City of Milwaukee	State of Wisconsin	National
Population ¹	32,649	594,833	5,686,986	308,745,538
Unemployment Rate ²	13.0%	13.2%	7.5%	9.3%
Percent Minority ¹	63.1%	55.2%	13.8%	26.7%
Median Household Income ²	\$36,194	\$35,823	\$52,627	\$53,046
Percent Children (under 18) ¹	22.4%	27.1%	23.6%	24.0%
% Owner-Occupied Housing	25.3%	43.6%	68.1%	73.5%

Units ¹				
--------------------	--	--	--	--

¹Data is from the 2010 U.S. Census data

²Data is from the 2008-2012 American Community Survey 5-Year Estimates

v. Programmatic Capability and Past Performance

The Redevelopment Authority of the City of Milwaukee is an independent corporation created by State of Wisconsin statute in 1958. Since that time Redevelopment Authority has been a leader in the field of economic development including the planning, design and development of retail and cultural centers, business parks, residential subdivisions, stand-alone commercial ventures, and hundreds of brownfield redevelopments. These economic development initiatives realize the Redevelopment Authority's mission of "eliminating blight conditions that inhibit neighborhood reinvestment, to foster and promote business expansion and job creation, and to facilitate new business and housing development." This mission involves hundreds of environmental projects including brownfield redevelopment, wind turbine placement, bike trail construction, and riverbank restoration.

Over the years, the Redevelopment Authority has developed a reputation for promoting and attracting development in both stable and marginal markets, and, for creating model solutions to complex real estate development and environmental challenges throughout Milwaukee County and in the Milwaukee, Menomonee, and Kinnickinnic watersheds. The Redevelopment Authority is responsible for the City of Milwaukee's Real Estate, the 30th Street Industrial Corridor, and the City's nationally-recognized Brownfield programs. The Redevelopment Authority staff manages projects from small vacant residential lots to vast economic drivers that address development plans, zoning changes, gap financing, and environmental aspects of remediation and sustainability. One such example is the MVIC, which includes the Menomonee Valley Riverbank Stabilization Project. This former 133-acre rail yard is located in the center of the City of Milwaukee adjacent to the Menomonee River. The property was vacant for nearly 20 years until the Redevelopment Authority acquired the property in 2003 and has since converted the property into an award-winning industrial center development and community park.

Since 2003, the Redevelopment Authority has leveraged \$28 million of funds to create the successful MVIC. Of those funds, over \$12.4 million originated from federal (EPA, EDA, HUD, GLBP), state (WDNR, DOA, Commerce), local (MMSD, TID), and private grants that were used to cleanup contamination to construct roads and utilities. The Redevelopment Authority has managed all aspects of the grants including the administrative and contractual elements of these grants. The individuals from the organization responsible for the administrative and contractual elements are many of the same people that have been involved since 2003 including the project manager, [REDACTED].

The Redevelopment Authority has over 14 years of extensive experience managing federal grants, including EPA Brownfield Grants, HUD Economic Development Initiative (EDI) Grants, and Economic Development Administration (EDA) grants. Listed below are five recent grants of similar size, scope, and relevance to the proposed Project.

For these five grants, as well as all past grants, the Redevelopment Authority has successfully complied with the workplans and kept the federal agency project manager informed when unforeseen challenges arose leading to a change in schedule, budget allocations, or any other aspect of the workplan. In addition, with substantial experience managing Brownfield Assessment Grants, Redevelopment Authority staff is very experienced with the Quality Assurance Project Plan requirements, as are the environmental consultants with whom we work. The Redevelopment Authority closely monitors the outputs and outcomes of each of these grants by reporting progress regularly in quarterly and semi-annual reports submitted to the assigned Project Officer as well as updating details for each site on ACRES.

Agency	Grant Number	Award Amount	Match Amount	Purpose	Current Project Status
EPA	2B-00E9650	\$450,000	\$90,000	Brownfield Revolving Loan Fund	Completed
EPA	2B-00E89701 (ARRA)	\$200,000	\$0	Brownfield Assessment	Completed
EPA	BF-00E90401	\$600,000	\$120,000	Brownfield Cleanup	Two of three sites are completed. Final site scheduled for cleanup in Fall 2014.
HUD	B-08-SP-WI-0678 (EDI)	\$492,500	\$0	Blight Elimination (Demolition, Environmental Assessment/ Cleanup)	Completed
EDA	06-79-05855	\$999,650	\$999,650	Greenway & Infrastructure Construction	Contractor approved; construction to begin in 2015

vi. Education / Outreach

The residents and businesses in the Menomonee River Valley neighborhoods have already been heavily involved in the planning efforts related to this redevelopment project. Numerous planning meetings have been undertaken over the years, but two in particular are the most recent and most relevant to this site. The first to be held was a public meeting at the Urban Ecology Center, across the Menomonee River from the Project. The public meeting was hosted by the Redevelopment Authority and was required by the State of Wisconsin Department of Transportation for use of the Congestion Mitigation and Air Quality (CMAQ) funds. The meeting took place on September 12, 2013 and was attended by dozens of constituents representing many of the organizations listed in Section iii above. Citizens took part in an open house and were engaged through stakeholder interviews and a broader community visioning discussion.

The second, more recent outreach opportunity is the Menomonee Valley 2.0 Plan that is currently being drafted by the City of Milwaukee Planning Department and covers the entire valley. Public participation in the Menomonee Valley 2.0 plan has entailed multiple mediums and avenues of participation. Given that there are no residential neighborhoods or enclaves in the valley itself, public participation focused on three areas: employees and employers in the valley; residents and businesses adjacent to the valley and, lastly, those persons, groups, and organizations with an interest in the valley and its future. In short, it was recognized early on that the valley is not simply an industrial area located in Milwaukee but, rather, the City's neighborhood in which to not only work but also to recreate and enjoy. While not intentional and wholly coincidental, the valley is roughly the size and shape of New York's Central Park and serves almost the same role – a community-wide asset adding mightily to the community well-being.

The public participation process for the Menomonee Valley 2.0 plan included: (1) a public open house in order to introduce to the public the reason for a new valley plan; (2) one-on-one individual stakeholder meetings; (3) small group meetings; (4) public workshops; and (5) on-line public participation at www.planthevalley.org. Adding up the collective public outreach efforts it appears that two major themes that has emerged no matter the venue or group is the need for better connections both within the

valley and to adjacent neighborhoods and opening up access to the waterways in the valley which are considered an underserved asset that needs to be opened up much like the river walk in downtown Milwaukee created a host of transformative assets for the city of Milwaukee. Due to its elevation differences and limited access points, better connections on multiple levels and at multiple points in the valley were rated a priority. One of these priority connections were access to and across the Menomonee River. The existing waterways are considered by nearly all participants to be an under-utilized asset in the valley that would create major recreational, ecological, entrainment, and economical opportunities in the valley.

The Redevelopment Authority has and will continue to engage the community throughout the restoration process. The Redevelopment Authority recently held a public meeting on August 21, 2014 notifying the public of the intent to apply for a U.S. EPA Great Lakes Restoration Initiative Grant and provide a platform for the community to provide comments. The public meeting was held as part of a regularly scheduled Redevelopment Authority Board meeting. This venue was chosen because the board meetings are traditionally better attended than meetings focused only on the grant proposals.

If the Redevelopment Authority receives this grant and is able to proceed forward with the riverbank restoration process, staff will continue to work with community partners to reach out to interested citizens and groups as the restoration proceeds in 2015, so that staff can continue to build trust among various stakeholders and educate and solicit feedback from interested parties about the goals of the project. The Redevelopment Authority will share information about the Project to the community groups listed in Section iii including the Menomonee Valley Business Improvement District 26, the Menomonee Valley Business Association, the Urban Ecology Center, and town hall meetings. Various types of meetings (e.g., town hall and community-based organization meetings) are already held on a monthly or quarterly basis at convenient locations within the proximity of the local residents, and Redevelopment Authority staff will seek to attend these meetings to present project updates and get feedback. The Redevelopment Authority will also make efforts to have restoration information contained in aldermanic and community group newsletters, as information becomes available. This will provide information to individuals that are not already involved in neighborhood community organizations. Also, the City of Milwaukee has a newly revamped website which has extensive information about the Menomonee River Valley, including an overview, job information, and redevelopment plan.

Detailed Budget Narrative

The grant amount requested in this proposal is based on a detailed Preliminary Engineer's Estimate that was completed in June 2014, along with full consideration of additional funding already secured. The estimate, along with the plan set is included in Document 13.

Budget Detail

If awarded, the GLRI funding requested with this proposal will be entirely allocated to contractual, hard costs. Therefore, there is no narrative to describe personnel, fringe benefits, travel, equipment, supplies, other, or indirect charges.

The contractual budget is based on a Preliminary Engineer's Estimate developed by Sigma Environmental Group and included in Document 13, and summarized into work categories below. With the exception of the [REDACTED] this contract will be let as one contract that will meet all federal procurement requirements. Sigma Environmental has already been retained to develop the plans and specs and will be involved as the construction manager. Sigma Environmental is one of three consulting firms that the Redevelopment Authority already has under an environmental Master Services Agreement (MSA). The current contract expires April 30, 2015, however there is one additional one-year extension available to invoke upon mutual consent of the parties. The consultants were procured following federal procurement regulations and are contracted as needed for individual projects.

• Clearing, Grubbing, Temporary Shoring	\$9,425
• Finishing Roadway	\$43,131
• Mobilization	\$75,000
• Erosion Control Measures, Specials	\$29,552
• Trees	\$12,525
• Shrubs	\$6,794
• Enhancement Zone Plugs	\$25,481
• Landscape Survey & Care Cycles	\$45,000
• Field Office, Signage	\$4,934
• Traffic Control	\$3,402
• Construction Staking	\$1,625
• Island Management Area	\$1,300
• Contaminated Soil Management, Capping	\$668,539
• Inlets, Underdrain	\$6,060
• Televising Sewer Lines	\$3,000
• Seeding	\$17,114
• Slope Stabilization	\$206,906
• Compost	\$37,206
• Stone Outcroppings, Trail	\$63,125
• [REDACTED]	[REDACTED]
TOTAL USES	\$1,449,018

The Redevelopment Authority has been successful in leveraging the following additional funding sources to support this project:

• Milwaukee Metropolitan Sewerage District (MMSD)	\$135,000
• Wisconsin Department of Natural Resources (WDNR)	\$130,000
• Fund for Lake Michigan	\$125,000
• Congestion Mitigation and Air Quality (CMAQ)	\$550,000
TOTAL SOURCES (ORIGINAL)	\$940,000
TOTAL SOURCES (REMAINING)	\$820,000

In summary, the grant amount requested was calculated by determining the current project gap and making a voluntary match commitment of \$50,000 in local funding, resulting in a grant request of **\$580,000** (\$1,449,018 - \$820,000 - \$50,000 = \$579,018).

Budget Table

	EPA Funding	Cost-Share
Personnel	\$0	\$0
Fringe Benefits	\$0	\$0
Travel	\$0	\$0
Equipment	\$0	\$0
Supplies	\$0	\$0
Contractual (North Bank Trail Contract)	\$580,000	\$50,000
Other	\$0	\$0
Indirect Charges	\$0	\$0
TOTAL FUNDING	\$580,000	\$50,000
TOTAL PROJECT COST	\$630,000	

Expeditious Spending and Sufficient Progress in the use of GLRI Funds

The streambank restoration project will be let as one contract, but paid for with multiple funding sources. If awarded, the GLRI grant will provide the final portion of funding, and the project would be put out to bid as soon as the funding is available.